Application No.: 09/662,432   MTS-3205US
Amendment Dated: February 22, 2005
Reply to Office Action of: November 24, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A reception system~~,~~ comprising:

a receiving ~~section~~ unit which ~~receives~~ is configured to receive a transport stream transmitted from a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least ~~an SDT and~~ an EIT;

a PID designating ~~section~~ unit which ~~can~~ is configured to designate a PID of a packet other than ~~an~~ the NIT packet in the electronic program guide information, as ~~a PID of~~ a replace packet ~~(hereinafter, referred to as replace PID)~~;

~~a replace PID storing device which stores the replace PID;~~

an SIT producing ~~section~~ unit which ~~produces~~ is configured to produce an SIT packet from the service information in the received transport stream; and

a packet extracting and replacing ~~section~~ unit which ~~can~~ is configured to replace ~~a replace packet indicated by said replace PID storing device,~~ not only ~~and the~~ an NIT packet but also the replace packet designated by the PID designating unit with the SIT packet.

2. (Currently Amended) A reception system according to claim 1, wherein ~~said~~ the transmission system produces a dummy packet for replacement, and inserts the dummy packet into the transport stream, and

~~said~~ the PID designating ~~section~~ unit designates a PID of the dummy packet ~~(hereinafter, referred to as dummy PID) as the replace PID~~; and

the packet extracting and replacing unit replaces not only an NIT packet but also the replace packet and the dummy packet designated by the PID designating unit with the SIT packet.

3.   (Currently Amended) A reception system according to claim 1, wherein said the transmission system produces interval information of the SIT packet, and transmits the interval information of the SIT packet with adding the interval information to the electronic program guide information, and

said the PID designating section unit designates the replace PID a PID of the replace packet with reference to the interval information of the SIT packet, and

the packet extracting and replacing unit replaces not only an NIT packet but also the replace packet designated by the PID designating unit with the SIT packet.

4.   (Currently Amended) A reception system according to claim 3 1, wherein

the designated replace PID is the PID designating unit designates a PID of a packet having contents of an unrecord program (hereinafter, referred to as unrecord PID), or an EIT PID or an SDT PID as an unrecord packet,

said the packet extracting and replacing section unit includes a PID filter and an SIT packet replacing device, and said the PID filter can is configured to extract a packet having the designated replace PID and contents of an unrecord program, and

the SIT packet replacing device replaces not only an NIT packet but also the replace packet and the unrecord packet designated by the PID designating unit.

5.   (Currently Amended) A reception system according to claim 1 3, wherein

said the PID d esignating s ection unit designates a P ID o f a packet having contents of an unrecord program (hereinafter, referred to as unrecord PID), or an EIT PID or an SDT PID, and

said the packet extracting and replacing section unit selects the replace packet from packets having the designated replace PID with reference to given interval information of the SIT packet, and actually replaces the selected packet with the SIT packet.

6.   (Currently Amended) A digital broadcasting system comprising:

a transmission system which produces and transmits a transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least an SDT and an EIT; and

a reception system having, comprising:

a receiving section unit which receives is configured to receive the a transport stream transmitted from said a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least an EIT;

a PID designating section unit which can is configured to designate a PID of a packet other than an the NIT packet in the electronic program guide information, as a PID of a replace packet (hereinafter, referred to as replace PID);

a replace PID storing device unit which stores is configured to store the replace PID;

an SIT producing section unit which produces is configured to produce an SIT packet from the service information in the received transport stream; and

a packet extracting and replacing section unit which can is configured to replace a replace packet indicated by said replace PID storing device, not only and the an NIT packet but also a replace packet indicated by the replace PID storing unit with the SIT packet.

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7.   (Currently Amended)   ~~A program recording medium which stores a program for causing a computer to execute a whole or a part of functions of a whole or a part of means according to any one of claims 1 to 6~~ <u>A reception system according to any one of claims 1 to 6, wherein the service information also has an SDT</u>.

8.   (Previously Presented)   In a communications system receiving a multiplexed transport stream including first and second programs, program specific information including a network information table (NIT), and service information, a method for recording the first program comprising the steps of:

(a) identifying a respective packet identifier (PID) for the first program, a packet of the second program and the NIT;

(b) storing the PID of the packet of the second program in a replacement store;

(c) storing the PID for the first program and the PID for the NIT;

(d) extracting the first program, the packet of the second program and the NIT in response to step (a);

(e) producing a selection information table (SIT) from the service information;

(f) replacing the NIT with the SIT using the PID stored in step (c);

(g) replacing the packet of the second program with the SIT using the PID for the packet of the second program stored in step (b); and

(h) recording the first program including the SIT produced in step (e) and the SIT from step (g).

9.   (Previously Presented)   In a communications system receiving a multiplexed transport stream including a program, a dummy program, program specific information including a network information table (NIT), and service information, a method for recording the program comprising the steps of:

(a) identifying a respective packet identifier (PID) for the program, the dummy program and the NIT;

(b) storing the PID of the dummy program in a replacement store;

(c) storing the PID for the program and the PID for the NIT;

(d) extracting the program, the dummy program and the NIT in response to step (a);

(e) producing a selection information table (SIT) from the service information;

(f) replacing the NIT with the SIT using the PID stored in step (c);

(g) replacing the dummy program with the SIT using the PID for the dummy program stored in step (b); and

(h) recording the program including the SIT produced in step (e) and the SIT from step (g).

10.   (Currently Amended) A reception system, comprising:

a receiving means unit of receiving which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an SDT and an EIT, and thereby produces and transmits a transport stream;

a PID designating means unit capable of which is configured to selectively designating designate a PID of a packet of a predetermined type which is other than the NIT packet in said the received transport stream, as a PID of a replace packet;

a replace PID storing means unit of storing which is configured to store said the selectively designated PID of said the replace packet, and

a packet replacing means unit capable of which is configured to replacing replace all or part of said the replace packet, the PID of which has been stored, with a packet which has been produced in advance.

11.   (Currently Amended) A microcomputer, comprising:

a_PID d esignating m eans—unit capable of—which is configured to selectively designating designate, as a PID of a replace packet, a PID of a packet of a predetermined type which is other than an NIT packet in a received transport stream which has been transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an SDT and an EIT, and thereby produces and transmits a transport stream wherein:

said the selectively designated PID of said the replace packet is stored; and

all or part of said the replace packet, the PID of which has been stored, is replaced with a packet which has been produced in advance.

12.   (Cancelled).

13.   (Currently Amended) A digital broadcast system, comprising:

a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an SDT and an EIT, and thereby produces and transmits a transport stream; and

a reception system comprising:

a receiving means—unit of receiving which is configured to receive said the transmitted transport stream;

a PID designating means—unit capable of—which is configured to selectively designating designate a PID of a packet of a predetermined type which is other than the NIT packet in said the received transport stream, as a PID of a replace packet;

a replace PID storing means—unit of storing which is configured to store said the selectively designated PID of said the replace packet; and

a packet replacing means—unit capable of replacing—which is configured to

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replace all or part of ~~said~~ the replace packet, the PID of which has been stored, with a
packet which has been produced in advance.

14.   (Currently Amended) A reception method, comprising:

a receiving step of receiving a transport stream transmitted from a transmission
system which multiplexes at least (1) compression coded contents of a program and (2)
electronic program guide information containing at least program specific information
having at least an NIT, a PAT, and a PMT and service information having at least ~~an SDT~~
~~and~~ an EIT, and thereby produces and transmits a transport stream;

a PID designating step of selectively designating a PID of a packet of a
predetermined type which is other than the NIT packet in ~~said~~ the received transport
stream, as a PID of a replace packet;

a replace PID storing step of storing ~~said~~ the selectively designated PID of ~~said~~
the replace packet; and

a packet replacing step of replacing all or part of ~~said~~ the replace packet, the PID
of which has been stored, with a packet which has been produced in advance.

15.-85. (Cancelled).

86.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted
from a transmission system which multiplexes at least (1) compression coded contents
of a program and (2) electronic program guide information containing at least program
specific information having at least an NIT, a PAT, and a PMT and service information
having at least an EIT, and thereby produces and transmits a transport stream;

an SIT producing unit which is configured to produce an SIT packet from the
service information in the received transport stream; and

a packet replacing unit which is configured to replace at least the EIT packet with
the SIT packet.

87.   (New) A reception system according to claim 86, wherein the transport stream modified by the packet replacing unit is outputted as a recording-use transport stream to the outside.

88.   (New) A reception system according to claim 86, wherein the packet replacing unit is further configured to replace the NIT packet with the SIT packet.

89.   (New) A digital broadcast system, comprising:

a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream; and

a reception system comprising:

a receiving unit which is configured to receive the transmitted transport stream;

an SIT producing unit which is configured to produce an SIT packet from the service information in the received transport stream; and

a packet replacement unit which is configured to replace at least the EIT packet with the SIT packet.

90.   (New) A reception method, comprising:

a receiving step of receiving a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream;

an SIT producing step of producing an SIT packet from the service information in the received transport stream; and

a packet replacing step of replacing at least the EIT packet with the SIT packet.

91. (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream;

a PID designating unit which is configured to selectively designate a PID of a packet of a predetermined type which is other than the NIT packet in the received transport stream, as a PID of a replace packet;

a replace PID storing unit which is configured to store the selectively designated PID of the replace packet;

an SIT producing unit which is configured to produce an SIT packet from the service information in the received transport stream; and

a packet replacing unit which is configured to replace all or part of the replace packet, the PID of which has been stored, with the SIT packet.

92. (New) A reception system according to claim 91, wherein:

the transport stream modified by the packet replacing unit is outputted as a recording-use transport stream to the outside; and

the packet of the predetermined type in the received transport stream is not included in the recording-use transport stream.

93. (New) A reception system according to claim 92, wherein all or part of the packet of the predetermined type in the received transport stream is a packet which contains contents of a program not to be recorded, among the compression coded contents of a program.

94. (New) A reception system according to any one of claims 91 to 93, wherein the replacing and/or the selective designation are carried out on the basis of interval information which is transmitted as an attachment to the electronic program

guide information from the transmission system, and which specifies an interval in which the replacing and/or the selective designation is to be carried out.

95.   (New) A reception system according to any one of claims 91 to 93, wherein the replacing and/or the selective designation are carried out on the basis of an interval in which the replacing and/or the selective designation is to be carried out and which is set according to a predetermined criterion.

96.   (New) A microcomputer, comprising:

a PID designating unit which is configured to selectively designate, as a PID of a replace packet, a PID of a packet of a predetermined type which is other than a program specific information in a received transport stream which has been transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream:

a replace PID storing unit which is configured to store the selectively designated PID of the replace packet;

a producing unit which is configured to produce an SIT packet from the service information in the received transport stream; and

a packet replacing unit which is configured to replace all or part of the replace packet, the PID of which has been stored, with a packet which has been produced in the producing unit.

97.   (New) A digital broadcast system, comprising:

a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream; and

a reception system comprising:

a receiving unit which is configured to receive the transmitted transport stream;

a PID designating unit which is configured to selectively designate a PID of a packet of a predetermined type which is other than the NIT packet in the received transport stream, as a PID of a replace packet;

a replace PID storing unit which is configured to store the selectively designated PID of the replace packet;

an SIT producing unit which is configured to produce an SIT packet from the service information in the received transport stream; and

a packet replacing unit which is configured to replace all or part of the replace packet, the PID of which has been stored, with the SIT packet.

98.   (New)   A transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream, wherein:

the transmitted transport stream is received;

a PID of a packet of a predetermined type which is other than the NIT packet in the received transport stream is selectively designated as a PID of a replace packet;

the selectively designated PID of the replace packet is stored;

an SIT packet is produced from the service information in the received transport stream;

all or part of the replace packet, the PID of which has been stored, is replaced with the SIT packet;

transmitted from the transmission system is interval information which is transmitted as an attachment to the electronic program guide information from the transmission system, and which specifies an interval in which the replacing and/or the selective designation is to be carried out; and

the replacing and/or the selective designation are carried out on the basis of the interval information.

99.   (New) A reception method, comprising:

a receiving step of receiving a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream;

a PID designating step of selectively designating a PID of a packet of a predetermined type which is other than the NIT packet in the received transport stream, as a PID of a replace packet;

a replace PID storing step of storing the selectively designated PID of the replace packet;

an SIT producing step of producing an SIT packet from the service information in the received transport stream; and

a packet replacing step of replacing all or part of the replace packet, the PID of which has been stored, with the SIT packet.

100.   (New) A reception system for: receiving a transport stream which has been transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program and (2) electronic program guide information containing at least program specific information having at least an NIT, a PAT, and a PMT and service information having at least an EIT, and thereby produces and transmits a transport stream; modifying the received transport stream by inserting an SIT packet thereinto; and then outputting the modified transport stream; wherein

the interval in which the SIT packet is outputted is determined on the basis of predetermined interval information relating to the SIT packet.

101.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program, (2) program specific information having at least a PAT and a PMT, and (3) service information having at least an EIT; and

a replacing unit which is configured to replace a packet having the EIT with a replace packet generated from the service information.

102.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program, (2) program specific information having at least a PAT and a PMT, and (3) service information having at least an EIT; and

a replacing unit which is configured to replace a packet having the EIT with a replace packet generated from the service information relating to a program which is selected by an external instruction.

103.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program, (2) program specific information having at least a PAT and a PMT, and (3) service information having at least an EIT; and

a replacing unit which is configured to replace a packet having the EIT with a SIT packet generated from the service information in the received transport stream.

104.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted

from a transmission system which multiplexes at least (1) compression coded contents of a program, (2) program specific information having at least a PAT and a PMT, and (3) service information having at least an EIT; and

a replacing unit which is configured to replace a packet having the EIT with a packet having a selection information table generated from the service information in the received transport stream.

105.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system which multiplexes at least (1) compression coded contents of a program, (2) program specific information having at least a PAT and a PMT, and (3) service information having at least an EIT; and

a replacing unit which is configured to replace a packet having the EIT with a packet generated from the EIT of the service information as a replace packet.

106.   (New) A reception system according to any one of claims 101 to 105, further comprising:

a designating unit which is configured to designate a PID of a packet having the EIT; and

a replacing unit which is configured to replace a packet having the EIT which is designated by the designating unit.

107.   (New) A reception system according to any one of claims 101 to 105, wherein the service information also has an SDT.

108.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at

least an EIT;

a PID designating unit which is configured to designate a PID of a packet other than the NIT packet in the electronic program guide information, as a replace packet; and

a packet extracting and replacing unit which is configured to replace not only an NIT packet but also the replace packet designated by the PID designating unit with a packet generated from the service information.

109.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least an EIT;

a PID designating unit which is configured to designate a PID of a packet other than the NIT packet in the electronic program guide information, as a replace packet; and

a packet extracting and replacing unit which is configured to replace not only an NIT packet but also the replace packet designated by the PID designating unit with a packet generated from the service information relating to a program which is selected by an external instruction.

110.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least an EIT;

a PID designating unit which is configured to designate a PID of a packet other than the NIT packet in the electronic program guide information, as a replace packet; and

a packet extracting and replacing unit which is configured to replace not only an NIT packet but also the replace packet designated by the PID designating unit with a packet having a selection information table generated from the service information in the received transport stream.

111.   (New) A reception system, comprising:

a receiving unit which is configured to receive a transport stream transmitted from a transmission system that produces and transmits the transport stream, the transport stream being produced by multiplexing compression coded contents of a program, and electronic program guide information including program specific information having at least an NIT, a PAT, and a PMT, and service information having at least an EIT;

a PID designating unit which is configured to designate a PID of a packet other than the NIT packet in the electronic program guide information, as a replace packet; and

a packet extracting and replacing unit which is configured to replace not only an NIT packet but also the replace packet designated by the PID designating unit with a packet generated from the EIT of the service information.

112.   (New) A reception system of introducing a packet generated from service information into a transport stream generated by multiplexing at least compression coded contents of a program, wherein an output frequency of the packets generated from the service information is determined on the basis of information concerning the output frequency of the packets generated from the service information.

113.   (New) A reception system according to claim 112, wherein the transport stream is generated by further multiplexing program specific information having a PAT and a PMT, and service information having an EIT.

114.   (New) A reception system according to claim 112 or 113, wherein at least one of the packets generated from the service information is a packet having an SIT.

115.   (New) A reception system according to claim 112 or 113, wherein at least one of the packets generated from the service information is a packet generated from the service information relating to a program which is selected by an external instruction.

116.   (New) A reception system according to claim 112 or 113, wherein at least one of the packets generated from the service information is a packet having a selection information table generated from the service information in the received transport stream.

117.   (New) A reception system according to claim 112 or 113, wherein at least one of the packets generated from the service information is a packet generated from the EIT of the service information.

118.   (New) A reception system of introducing a packet into a transport stream generated by multiplexing (1) compression coded contents of a program, (2) program specific information having a PAT and a PMT, and (3) service information having an EIT, and of outputting the transport stream, the packet being generated from the service information, wherein the reception system comprises:

a replacing unit which is configured to replace plural types of packets in the transport stream with packets generated from the service information.

119.   (New) A reception system of introducing a packet into a transport stream generated by multiplexing (1) compression coded contents of a program, (2) program specific information having a PAT and a PMT, and (3) service information having an EIT, and of outputting the transport stream, the packet being generated from the service information, wherein the reception system comprises:

a designating unit which is configured to designate PIDs of plural types of packets in the transport stream; and

a packet replacing unit which is configured to replace all or part of packets having the designated PIDs with packets generated from the service information.

120.   (New)   A reception system according to claim 118 or 119, wherein the replacing is performed such that an output frequency of the packets generated from the service information becomes a predetermined value.

121.   (New)   A reception system according to claim 118 or 119, wherein the target packets for the replacing include a packet which contains contents of a program not to be recorded.

122.   (New)   A reception system according to claim 118 or 119, wherein at least one of the packets generated from the service information is a packet having an SIT.

123.   (New)   A reception system according to claim 118 or 119, wherein at least one of the packets generated from the service information is a packet generated from the service information relating to a program which is selected by an external instruction.

124.   (New)   A reception system according to claim 118 or 119, wherein at least one of the packets generated from the service information is a packet having a selection information table generated from the service information in the received transport stream.

125.   (New)   A reception system according to claim 118 or 119, wherein at least one of the packets generated from the service information is a packet generated from the EIT of the service information.